DOCUMENT RESUME

ED 167 777 CE 020 151

AUTHOR Klaas, Alan C.
TITLE Career Education in the Large Urban Setting--Detroit Public Schools, Detroit, Michigan. Evaluator's Report, 1976-1978.
INSTITUTION Detroit Public Schools, Mich.
SPONS AGENCY Office of Career Education (DHEW/OE), Washington, D.C.
PUB DATE 78
CONTRACT 300-76-0411
NOTE 148p.; For related documents see CE 020 149, ED 132 284, and ED 138 786

EDRS PRICE MF01/PC06 Plus Postage.
DESCRIPTORS *Career Education; *Demonstration Projects; Formative Evaluation; *Research Methodology; Secondary Education; *Statistical Analysis; Summative Evaluation; Urban Areas; *Urban Schools
IDENTIFIERS *Detroit Public Schools MI; Education Amendments 1974

ABSTRACT

This evaluator's report of a career education project for the Detroit Public Schools is divided into two sections. Section 1, process evaluation, provides a summary of the activities reported by the project personnel for the eight deliverables collected and analyzed by the evaluator staff: (1) curriculum infusion, (2) career counseling/placement/follow-up, (3) community involvement (business), (4) deprivation needs, (5) parent training and involvement, (6) staff training, (7) involvement of principles, and (8) reduction of race and sex stereotyping. The second section, product evaluation, describes the evaluation instruments used, the subjects of the data collection, and the testing plan. The major portion of the section includes the results of the data collection for fourteen student objectives and one educator objective. The objectives are as follow: recognizing similarities and differences; establishing goals; understanding individual and group behavior; interpersonal relationships; sources of education and training; occupational information; decision making factors; self assessment; career options; life roles; participating in career planning; gaining education or training (basic skills); resources to implement career goals; goal attainment influencing factors; goal change factors; and educator knowledge of career education. Completing the report are student comments related to the career education program, and general project conclusions. (JH)

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EVALUATOR'S REPORT

CAREER EDUCATION IN THE LARGE URBAN SETTING
DETROIT PUBLIC SCHOOLS
DETROIT, MICHIGAN

PREPARED BY

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FUNDED BY

UNITED STATES OFFICE OF EDUCATION
OFFICE OF CAREER EDUCATION
WASHINGTON, D.C.

CE 020 151

U S DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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FORWARD

Pursuant to the agreement between Dr. Alan C. Klaas and the Detroit Public Schools, this evaluation report is submitted for DHEW/Office of Education contract no. 300760411, Modification #2 - Phase II of a project entitled "Demonstrating Career Education in a Large Urban Setting". Any opinions and/or conclusions contained herein are those of the Evaluation Consultant and not necessarily those of the Detroit Public Schools.

In this project the Evaluation Consultant had responsibility for instrument selection, designing data collection procedures, supervising data collection, data analysis, interpretation of data analysis, and the writing of this "Evaluator's Report".

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INTRODUCTION

The evaluation design of the career education project for the Detroit Public Schools was divided into two major types. The first type was labeled with the term "Process Evaluation". The second type was labeled with the term "Product Evaluation". The content and purpose of these two types of evaluation were different. The procedures and judgemental criterion of these two types of evaluation were different. However, both types of evaluation have the same final goal: to collect information on the value and utility of the activities of the Detroit Career Education Project.

The process evaluation dealt with the activities undertaken during the second year of funding of the project. The product evaluation dealt with the measurable outcomes at the end of the project.

This Evaluator's Report contains two large sections. The first large section will provide a recap of the process evaluation. The process evaluation materials were previously reported to the Office of Career Education in the form of bi-monthly reports. Persons wishing more detailed listings of the process evaluation materials should consult the five bi-monthly reports.

The second large section of this Evaluator's Report provides a detailed description of the results of the posttesting and data analysis. The data analysis is presented in the 14 student objectives and the one educator objective for the second year of project funding.

The concluding section of this Evaluator's Report will list the evaluator's assessment of the total data presented in the body of the report.

An accompanying document has been prepared. The accompanying document is entitled "Executive Summary of the Evaluator's Report" The summary is an extremely cursive recap of all the material contained in this Evaluator's Report.

PROCESS EVALUATION

PROCESS EVALUATION INTRODUCTION

The process evaluation data consisted of self reporting forms filled out by the project teachers, project staff, project director, and project curriculum consultant. The self report forms were collected bi-monthly and processed by the evaluation staff. The data is self report. If project personnel undertook career education related activities but did not report those activities on the desired form, then the evaluation staff would have no record of the activity. The result is that an undertaken activity would not have been recorded in the process evaluation.

The process evaluation consisted of bi-monthly reports to the United States Office of Career Education (USCE). These bi-monthly reports contained information organized into nine "Deliverables" (labeled I throuth IX). The ninth deliverable consisted of a summary on the part of the Project Director listing successful activities and/or suggestions to persons conducting infusion of career education in similar situations. This ninth deliverable was not under the supervision of the evaluator. The ninth deliverable is not discussed in this Evaluator's Report. It is assumed that the Project Dirctor's report will contain that information.

The bi-monthly reports were supplied to USCE in five groupings. Each grouping listed the number of weeks contained in that date grouping during which school was in session. The definition of a "week" was more stringent than might have been normally used. Within this project reporting process a week was only counted if that week contained 5 full days of school. Thus, weeks which contained vacation days, snow days, semester test or change days, or other partial weeks of

on the general school district calender were NOT counted as a "week".

The term week was used in the criterion of level of functioning in the process evaluation. For instance, the Project Director, curriculum consultant and the evaluator agreed that "two activities per week" would be the appropriate criterion for the teachers in the first objective of Deliverable I. In making the assessment of whether or not that criterion was met the above definition of a "week" was used. The result is that the teacher was not "penalized" for distracting weeks within the school system. In actual fact, the teacher was given bonus days in that these non-counted partial weeks contained days in which the the teacher could have conducted career education activities and had those activities count toward the criterion.

The groupings of the dates for the bi-monthly reports are listed below along with the number of weeks judged to be contained in that grouping:

#1	September 20	-	October 17	= 1 week
#2	October 19	-	December 13	= 5 weeks
#3	December 14	-	February 14	= 5 weeks
#4	February 15	-	April 12	= 7 weeks
#5	April 13	-	May 24	= 6 weeks

24 weeks total used to establish criterions

The following eight sections provide a summary of the activities reported by the project personnel for the eight deliverables collected and analyzed by the evaluation staff.

The process evaluation report forms were designed by the curriculum consultant and the evaluation consultant to provide the basic structure of a quality infusion lesson without becoming so complex that the teachers would resent the time required to complete the forms. The forms will yield a general understanding of what the teacher had attempted to do in the lesson, how that effort was undertaken, what resources were used, and what was the teacher's assessment of the lesson.

Appendix A contains a copy of each of the forms used in the collection of data for Deliverables I through VIII.

DELIVERABLE I - CURRICULUM INFUSION

Table 1 lists the three objectives contained in Deliverable I. Table 1 also provides the criterion for each objective, number of people involved, frequency in each reporing period, total frequency, and total criterion frequency.

Table 1

Summary of Reported Activities for Deliverable I

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Activities will be devised which will support the attainment of the 15 career development project objectives.								
2/week	100 Tea.	15	144	355	816	613	1,943	4,800
B. Appropriate resources will be obtained to support the activities devised.								
1/week	100 Tea.	15	160	734	636	394	1,939	2,400
C. Activities devised to support the 15 career development project objectives will be implemented.								
2/week	100 Tea.	15	142	324	800	582	1,863	4,800

The frequency of reported activities experienced a sharp increase at the third bi-monthly period. At that point the project staff devoted larger amounts of effort toward getting the teachers to fill out the evaluation forms. The teachers were also provided with an hourly stipend to fill out the forms.

The amount of frequency represents a sort of good news-bad news picture. The good news is that a very large number of career education activities (1,863) were implemented by the total teacher group. The "bad news" is that this number represents an average of 0.78 career education activities per teacher per week for 24 project "weeks" and not the full 36 school calender weeks.

The teacher designed career education activities fell into three broad types of activity. The first type of activity can be described as "bulletin board" activity. They represent the collection of activities which are display oriented. The teachers did report attempts to make points of education to the students from these display materials in most situations.

The second type of reported activity could be described as a "time out" activity. This type of activity is characterized by the teacher stopping the academic instructional program, running a career education teaching situation, and the returning to the academic instructional program. Many aspects of career education are best communicated in the "time out" approach. However, neither the "bulletin board" approach or the "time out" approach fit the pure understanding of infusion into the everyday classroom activities.

The third type of reported activity would be the "infusion" approach. The infusion approach describes the procedure wherein the teacher presents career education material <u>within</u> the regular academic lesson. While no specific frequency counts of the number of each of these three types was made, a very liberal estimate would be that 1/3 or less of the teacher reported activities could be characterized as being "infusion".

DELIVERABLE II - CAREER COUNSELING/PLACEMENT/FOLLOW-UP

Table 2 lists the three objectives contained in Deliverable II. Table 2 also provides the criterion for each objective, number on people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 2

Summary of Reported Activities for Deliverable II

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Provide career counseling and guidance								
2/week	19 Coun.	10	5	11	61	41	128	912
B. Provide career placement								
2/week	19 Coun. 2 Staff	1	0	9	0	5	15	912
C. Provide follow-up services								
2/month	19 Coun.	0	0	0	0	8	8	266

The counselors in the participating schools had very little reported activity within the career education project. The majority of the activities were undertaken by two counselors at Southeastern High School and a few of the elementary counselors.

DELIVERABLE III - COMMUNITY INVOLVEMENT (BUSINESS)

Table 3 lists the four objectives contained in Deliverable III. Table 3 also provides the criterion for each objective, number of people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 3

Summary of Reported Activities for Deliverable III

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Requirements or needs for business and community involvement will be identified.								
2/week	1 Bus. Coord.	3	12	10	24	NA	49	36
B. Appropriate business and community resources to meet the determined needs will be identified and available will be noted.								
2/week	1 Bus. Coord.	3	9	11	25	NA	48	36
C. Liaison with identified business/community resourses will be established. Procedures for maintaining liaison will be established and their operational success verified.								
2/week	1 Bus. Coor.	3	10	13	9	NA	35	36
D. Appropriate identified business and community resources will be coordinated with classroom activities. Ongoing liaison with community and instructional staff about the status of business involvement will be established and maintained. Procedures for maintaining this liaison will be established and their operational success verified.								
2/week	1 Bus. Coor.	5	17	11	19	NA	52	36

During the time frame of the fifth bi-monthly the business coordinator was heavily involved with the posttesting, a major community career education activity, and project leadership during the Project Director's vacation. Therefor, the fifth period was omitted from consideration in calculating the criterion frequencies.

The business coordinator performed to an exceptionally high level. Not only were the activities of sufficient frequency to meet the criterion, but the quality of those activities was very high. The business coordinator would be an excellent resource person related to business involvment in career education programs.

DELIVERABLE IV - DEPRIVATION NEEDS

Table 4 lists the two objectives contained in Deliverable IV. Table 4 also provides the criterion for each objective, number of people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 4

Summary of Reported Activities for Deliverable IV

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Deprivation needs will be identified, catagorized, and prioritized by school and grade level.								
2/week	1 Comm. Coord.	2	5	0	0	0	7	48
B. Tentative solutions will be developed and deprivation needs identified, and final solutions will be identified and implemented.								
2/week	1 Comm. Coord.	2	2	0	0	0	4	48

Of particular difficulty to Deliverable IV is that the community coordinator left the project to take a different position during the month of January. The position was not filled for the remainder of the school year. Other members of the staff were to pick up the duties of the community coordinator. This was done, but no activities were reported specifically related to the solution of deprivation needs.

DELIVERABLE V - PARENT TRAINING AND INVOLVEMENT

Table 5 lists the two objectives contained in Deliverable V. Table 5 also provides the criterion for each objective, number of people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 5

Summary of Reported Activities for Deliverable V

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Parent needs which relate to achievement of career development objectives will be determined.								
2/week	1 Comm. Coord.	0	0	0	0	NA	0	36
B. Training mechanisms will be developed to accomodate each need.								
2/week	1 Comm. Coord.	4	10	0	0	NA	14	36

The comments stated for Deliverable IV concerning the lack of a community coordinator for the last five months of the project apply equally for Deliverable V. The NA is listed during the fifth reporting period to indicate that the staff was heavily involved in the posttesting process and might not have had sufficient time to work on Deliverable V activities.

DELIVERABLE VI - STAFF TRAINING

Table 6 lists the three objectives contained in Deliverable VI. Table 6 also provides the criterion for each objective, number of people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 6

Summary of Reported Activities for Deliverable VI

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Assist teachers in developing and refining C. E. Infused Lesson Plans								
As needed	WSU Fac.	0	28	8	14	0	50	As needed
B. Provide instruction in activities for the content or discipline.								
As needed	WSU Fac.	0	28	4	7	0	39	As needed
C. Provide instruction in facilitation for administrators								
As needed	WSU Fac.	0	0	0	0	0	0	As needed

The three types of instruction contained in Deliverable VI were provided by faculty of Wayne State University under a subcontract administered by the curriculum consultant. Instruction in the first two objectives was planned by the curriculum consultant with the consultation of the Project Director. The instruction schedule was modified to meet the learning needs of the teachers after consultation between the curriculum consultant and project staff and Director. No instruction was planned or requested for the principals that the evaluation consultant is aware of or reported.

DELIVERABLE VII - INVOLVEMENT OF PRINCIPALS

Table 7 lists the two objectives contained in Deliverable VII. Table 7 also provides the criterion for each objective, number of people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 7

Summary of Reported Activities for Deliverable VII

Criterion	# People Involved	Objective / Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Provide instruction to principal regarding the establishment of effective relationships between principals, counselors, teachers, and effective procedures for facilitating programs--particularily C. E. programs.								
Instruct. Provided	Project Director	0	15	4	0	0	19	--
B. Provide instruction to principals regarding the nature of Career Education.								
Instruct. Provided	Project Director	0	0	2	0	0	2	--

As can be seen in the table, not very many activities were provided for the principals in the two listed objectives. Of importance to note, however, is that the cooperation level of the principals was very high throughout the duration of the full two years of the project. Instruction and/or consultation regarding the first objective was probably not needed in this situation of high principal cooperation.

Building principals in the Detroit Public Schools can have from five to 15 or 20 special project within their building. This high special program level is particularily true in the regions of the school system where the project was located. The building principals in the project schools simply do not have the

time to carry out their regular administrative functions and receive content training in each special project. The absence of principal training in the content of career education seems justified given the high level of principal cooperation with project activities.

DELIVERABLE VIII - REDUCTION OF RACE AND SEX STEREOTYPING

Table 8 lists the two objectives contained in Deliverable VIII. Table 8 also provides the criterion for each objective, number of people involved, frequency in each reporting period, total frequency, and total criterion frequency.

Table 8

Summary of Reported Activities for Deliverable VIII

Criterion	# People Involved	Objective Reporting Periods #1	#2	#3	#4	#5	Total Reported Frequency	Total Criterion Frequency
A. Materials dealing with careers and reduction of race and sex stereotyping will be located.								
Located	Director	0	0	1	0	0	1	Located
B. Materials will be made available to administrators, counselors, and teachers dealing with use of materials and techniques and activities to reduce race and sex stereotyping.								
Located	Director	0	0	2	0	0	2	Located

Only three activities were reported to the evaluation staff. This low amount of activity seems to have three possible explanations. First, materials were acquired but not reported to the evaluation staff. Second, there are almost no materials available on stereotyping reduction. Third, attention was not given to the objectives contained within Deliverable VIII.

The evaluation consultant does not know the quantity of material which is available specifically directed at reduction of stereotyping. Therefor, the evaluation consultant is not able to indicate which of the three possible explanations should be applied to the low amount of reported activity on Deliverable VIII.

PRODUCT EVALUATION

PRODUCT EVALUATION INTRODUCTION

The product evaluation followed the traditional pretest/posttest/control group design. This introduction section will describe the instruments used, the subjects of the data collection, and the testing plan. Following this introduction section will be 15 subsections. Each subsection will describe one of the 14 student objectives plus one educator objective data collection results.

Instruments

The instruments used in the product evaluation were of three basic types: sections of the Career Maturity Inventory, sections of the Texas Career Education Measurement Series, and an assortment of instruments known to the evaluation consultant. All instruments used in the evaluation are provided in Appendix B

Career Maturity Inventory. Five sections of the Competence Test of the Career Maturity Inventory (CMI) were chosen for use in the project because of the match of those five sections with specific project objectives related to student knwoledge and/or skills. The CMI was authored by John O. Crites and is published by CTB/McGraw-Hill. The five sections are described as being valid because of the pains taking effort which went into the selection of items which appeared to measure the subject of each section. Due to the relatively new content area of career education this logic appeared to be sufficient material in support of the validity of the instruments. Reliability is represented in the form of internal consistency coefficients (KR20) for grades six through twelve. These coefficients ranged from .58 to .90 with a median coefficient of .83. Norms are provided for grades six through twelve. Each of the sections of the CMI are quite lengthy and verbal. As a result, only the first fen questions of each section were used in the project. The five sections used in the product evaluation were:

Knowing About Jobs (instrument Q in this project), Knowing Yourself (instrument J), Choosing a Job (instrument S), Looking Ahead (instrument T), and What Should They Do? (instrument K)

Texas Career Education Measurement Series. Seven sections of the Texas Career Education Measurement Series (TCEMS) were chosen for use in the project. The TCEMS was developed by Westinghouse Learning Corporation/Measurement Research Center for the Texas Educatim Agency and the Partners in Career Education Project. The instruments were broken down into smaller instruments in 1977 and published by Partners in Career Education under the title Needs Assessment & Evaluation Guide For Career Education. Career education personnel in Texas had evolved a well designed series of objectives concerning student skills and behavior. Because many of these objectives were very similar to thos identified for the Detroit project, the instruments were appropriate.

The validity of the TCEMS sections is in terms of the close match of the items in the various sections to the objectives of Texas career education. The items were also screened for their reaction to teaching and found that score increases would occur if the objectives were taught in classrooms. The instruments were screened in terms of internal consistency reliability (KR20) but the data were not included in descriptive materials.

The TCEMS reflected the Spanish-Mexican influence in the school population of the State of Texas. Many of the surnames used in the items were of Spanish origin. Rather than have this characteristic cause some difficulty with the acceptability of the instruments in the Detroit Public Schools, most of the Spanish surnames were changed to names more familiar to the Detroit school children.

The sections of the TCEMS used in the product evaluation were: Planning and Decision Making (instrument K), Interpersonal Skills (instrument L), Group Skills (instrument M), Education/Career Opportunities Relationships (instrument N), Job Acquisition and Retention (instrument U), Personal Attitudes Toward Work (instrument V),

and Work Attitudes (instrument W).

Assorted Instruments. The remaining instruments were collected from a variety of sources. They are largely content specific with the opinion of the author of the instrument being the primary source of instrument quality information.

The Student Personal Assessment (SPA - instrument I) is a set of items which are very similar to the items on the CMI and the TCEMS instruments. However, the items in SPA are at a much lower reading level and seemed more appropriate to the third, fifth and sixth grade students.

The Contrasting Work Settings (CWS) Primary (instrument O) and Intermediate (inst. P) forms had been developed by a career education project in Springfield Oregon. The two instruments were written at a very low level of English in a grammar form for very young children. The two forms measure the same objective that the CMI section Knowing About Jobs treats for older children.

The Educator Knowledge of Career Education (EKCE) is contained in the Personnel Planning Kit which the evaluation consultant had written for the Michigan Department of Education in 1975. This instrument was designed to measure knowledge of the Michigan model of career education held by professional educators in the State of Michigan. As several of the Michigan Public Schools project objectives were the same as the Michigan model objectives, this already existing instrument was adopted for the product evaluation.

All instruments were reviewed for sex and race bias or stereotyping by content experts in that field at Wayne State University. In several locations in the testing instruments surnames were changed to achieve a more appropriate balance of sex in relation to occupational descriptions or situations. Items with potentially derogatory racial connotations were removed.

Subjects

The subjects of the student career education product evaluation were about 30% of all third, fifth and sixth graders and 100% of all eighth, ninth, eleventh, and

twelveth graders in the project schools. Additionally, students from the above grade levels in two elementary, one middle school, and one high school not involved in the project participated as the control group. Staff contacts within the control schools indicated that these school made no special career education effort during the time frame between the pretesting and the posttesting.

Testing Plan

The pretesting was conducted in the form of a needs assessment in February, 1977. The testing was done in the same project and control schools in the pretesting as in the posttesting with the exception of one elementary school which was disbanded by the Detroit Public Schools at the end of the 1976-77 school year. The pretesting administration of instruments was done by contract teachers of the Detroit Public Schools. These were fully certified school district teachers who happened to be between assignments during February, 1977.

The pretest scores of the project students were compared with the pretest scores of the control students to determine equality of the two groups. Of the 52 comparisons made 22 showed nonsignificant differences, 13 showed significant differences in favor of the project students, and 17 showed significant differences in favor of the control group. The evaluation consultant concluded that these two school student groups were equivalent for research purposes. The comparisons are detailed in a document previously submitted to USCE titled Report of Project-Control Group Equality on Career Education Constructs Using Pretest (February, 1977) Data for Detroit Public Schools Career Education Demonstration Project.

The postesting was conducted during May, 1978. The project staff did the administration of the instruments to the project and control students.

Existing sections or classes were used as the testing random grouping unit. The instruments were randomly assigned in pairs to the classroom section units.

The only modification to randomness was to assure that no two long instruments were administered to the same section and that no instrument was consistently administered at one time of the day.

All statistical tests were decided at the .05 level of statistical significance. The statistical procedure which was utilized to answer all of the statistical questions was the one-tailed t-test for independent samples.

For comparisons of the project group from March, 1977 (pretest) to May, 1978 (posttest) a "+" sign in front of the t-Value indicates that the posttest score was higher, indicating growth in knowledge. Conversely, a "-" sign in front of the t-Value indicates that the pretest score was higher, indicating that some lower level of knowledge is present. This comparison will be the top portion of each data table.

For the comparisons of the posttest project student scores with the control student scores a "+" sign in front of the t-Value indicates that the project students scored higher. Conversely, a "-" sign in front of the t-Value indicates that the control group scored higher. This comparison will be the bottom portion of each data table.

OBJECTIVE S1 - RECOGNIZING SIMILARITIES AND DIFFERENCES

Objective S1: As a result of the project the participating students will demonstrate ability to recognize similarities and differences between his/her physical, intellectual and emotional characterisitcs and those of others.

A total of 124 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 16 Activities	Grade 8 - 26 Activities
Grade 5 - 18 Activities	Grade 9 - 11 Activities
Grade 6 - 42 Activities	Grade 11 - 4 Activities
	Grade 12 - 7 Activities

Two instruments were used to measure this objective. Third, fifth, and sixth graders were measured with Instrument I. Student Personal Assessment. Eighth, ninth, eleventh and twelfth graders were measured with Instrument J. Knowing Yourself.

Table 9 shows that for the third graders the posttest students scored significantly lower than the pretest students and that the control students scored higher than the project students at the posttest.

Table 10 shows that for the fifth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control groups at the posttest.

Table 11 shows that for the sixth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control groups at the posttest.

Table 12 shows that for the eighth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control groups at the posttest.

Table 13 shows that for the ninth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control groups at the posttest.

Table 14 shows that for the eleventh graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 15 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest and that the project students scored significantly higher than the control students at the posttest.

Only the twelfth graders in the project scored higher than the control group, whereas the third graders in the project scored lower than the control group. All other grades scored no differently from the control group. The conclusion is that project students were about the same as the control students for the instruments used to measure Objective S1.

TABLE 9

Grade 3 Instrument: I. Student Personal Assessment

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	2.94	1.53	109	-4.83	.001
May, 1978	2.05	1.71	240		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	2.05	1.71	240	-2.46	.007
Control	2.49	1.41	101		

TABLE 10

Grade 5 Instrument: I. Student Personal Assessment

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	2.45	1.24	29	1.97	.02
May, 1978	2.95	1.48	230		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	2.95	1.48	230	0.67	.25
Control	2.84	1.39	112		

TABLE 11

Grade 6 Instrument: I. Student Personal Assessment

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	2.23	1.37	35	3.55	.001
May, 1978	3.01	1.24	246		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	3.11	1.24	246	-1.09	.14
Control	3.28	1.52	128		

TABLE 12

Grade 8 Instrument: J. Knowing Yourself

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.24	1.92	103	5.12	.001
May, 1978	4.59	1.97	117		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.59	1.97	117	0.78	.218
Control	4.14	2.51	22		

TABLE 13

Grade 9 Instrument: J. Knowing Yourself

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.44	2.02	87	1.84	.033
May, 1978	5.05	2.13	73		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.05	2.13	73	-0.77	.221
Control	5.42	1.98	24		

TABLE 14

Grade 11 Instrument: J. Knowing Yourself

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.51	2.76	35	2.84	.002
May, 1978	6.11	2.00	44		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.11	2.00	44	-1.01	.156
Control	6.56	1.86	34		

TABLE 15

Grade 12 Instrument: J. Knowing Yourself

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.93	2.54	71	1.92	.027
May, 1978	6.70	1.95	57		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.70	1.95	57	2.68	.004
Control	5.12	2.59	25		

OBJECTIVE S2 - ESTABLISHING GOALS

Objective S2: As a result of the project the participating students will have established personal goals related to their self-development.

A total of 100 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 9 Activities	Grade 8 - 13 Activities
Grade 5 - 22 Activities	Grade 9 - 19 Activities
Grade 6 - 11 Activities	Grade 11 - 15 Activities
	Grade 12 - 11 Activities

Table 16 shows that for the eighth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 17 shows that for the ninth graders there was not a significant difference from the pretest to the posttest, but that the project students scored significantly higher than the control students at the posttest.

Table 18 shows that for the eleventh graders there was not a significant difference from the pretest to the posttest and that there was not a significant difference between the project and control student scores at the posttest.

Table 19 shows that for the twelfth graders there was a significant gain in scoring form the pretest to the posttest, but that the control students scored significantly higher than the project students at the posttest.

While the project ninth graders scored higher than the control students, the control twelfth graders scored higher than the project students. The conclusion is that project students were about the same as the control students for the instrument used to measure Objective S2.

TABLE 16

Grade 8 Instrument: K. Planning and Decision Making

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.63	2.85	30	2.57	.005
May, 1978	8.15	3.04	135		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	8.15	3.04	135	0.59	.278
Control	7.83	3.18	46		

TABLE 17

Grade 9 Instrument: K. Planning and Decision Making

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	7.53	3.02	91	1.48	.069
May, 1978	8.22	3.41	102		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	8.22	3.41	102	3.78	.001
Control	5.50	4.07	42		

TABLE 18

Grade 11 Instrument: K. Planning and Decision Making

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	9.56	3.92	16	0.47	.319
May, 1978	10.07	3.26	74		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	10.07	3.26	74	0.07	.472
Control	10.02	3.15	24		

TABLE 19

Grade 12 Instrument: K. Planning and Decision Making

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.80	4.90	60	3.32	.001
May, 1978	9.49	3.40	47		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	9.49	3.40	47	-2.26	.010
Control	11.43	3.11	21		

OBJECTIVE S3 - UNDERSTAND INDIVIDUAL AND GROUP BEHAVIOR

Objective S3: As a result of the project the participating students will demonstrate the ability to understand individual and group aspects of behavior.

A total of 95 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 16 Activities	Grade 8 - 9 Activities
Grade 5 - 13 Activities	Grade 9 - 15 Activities
Grade 6 - 18 Activities	Grade 11 - 11 Activities
	Grade 12 - 13 Activities

Table 17 shows that for the eighth graders there was not a significant difference in scoring from the pretest to the posttest and that the control group scored higher than the project group at the posttest.

Table 18 shows that for the ninth graders there was not a significant difference in scoring from the pretest to the posttest and that there was not a significant difference between the project students and control students on the posttest.

Table 19 shows that for the eleventh graders there was a significant gain in scoring from the pretest to the posttest and that the project students scored significantly higher than the control students on the posttest.

Table 20 shows that for the twelfth graders there was not a significant difference in scoring from the pretest to the posttest and that there was not a significant difference between project students and control students on the posttest.

Only the eleventh graders showed score increases and scores higher than the control group. Eighth graders showed scores lower than the control group. The conclusion is that the project students were about the same as the control students for the instrument measuing Objective S3.

TABLE 20

Grade 8 Instrument: M. Group Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.50	1.94	68	0.10	.460
May, 1978	4.53	1.97	101		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.53	1.97	101	-3.13	.001
Control	5.57	1.93	53		

TABLE 21

Grade 9 Instrument: M. Group Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.68	2.03	98	1.04	.149
May, 1978	5.00	1.82	64		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.00	1.82	64	0.15	.440
Control	4.93	2.04	28		

TABLE 22

Grade 11 Instrument: M. Group Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.17	2.18	46	2.10	.018
May, 1978	6.00	1.74	61		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.00	1.74	61	2.62	.004
Control	5.08	1.69	40		

TABLE 23

Grade 12 Instrument: M. Group Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.10	2.19	39	-0.41	.341
May, 1978	5.92	1.94	60		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.92	1.94	60	0.42	.337
Control	5.71	2.10	24		

OBJECTIVE S4 - INTERPERSONAL RELATIONSHIPS

Objective S4: As a result of the project the participating students will demonstrate the ability to initiate and maintain interpersonal relationships.

A total of 51 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 7 Activities	Grade 8 - 19 Activities
Grade 5 - 6 Activities	Grade 9 - 4 Activities
Grade 6 - 6 Activities	Grade 11 - 4 Activities
	Grade 12 - 5 Activities

Table 24 shows that for the eighth graders there was a significant gain in scoring from the pretest to the posttest and that the project students scored significantly higher than the control students at the posttest.

Table 25 shows that for the ninth graders there was not a significant difference in scoring from the pretest to the posttest and that there was not a significant difference between project students and control students at the posttest.

Table 26 shows that for the eleventh graders there was a significant loss of scoring from the pretest to the posttest and that the control students scored significantly higher than the project students at the posttest. Of note is the marked loss in scoring within the project-posttest scores. This unusual occurance places the utility of the project-posttest scores in doubt.

Table 27 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

The eighth graders showed posttest scores of the project students to be higher than the control students, but ninth graders did not. The eleventh graders scores can not be considered as contributing to the decision. The twelfth graders came close to showing significantly better project group scores than control group

scores. The conclusion is that some movement in the direction of saying that the project students did better than the control students on Objective S4 is warranted. It would not be warranted to make a firm conclusion that the project students definitely surpassed the control students.

TABLE 24

Grade 8 Instrument: L. Interpersonal Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	7.00	2.52	49	1.90	.029
May, 1978	7.81	2.33	112		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	7.81	2.33	112	2.02	.022
Control	6.80	2.20	25		

TABLE 25

Grade 9 Instrument: L. Interpersonal Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	7.33	2.80	27	-0.35	.363
May, 1978	7.11	2.56	73		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	7.11	2.56	73	0.73	.233
Control	6.60	1.90	10		

TABLE 26

Grade 11 Instrument: L. Interpersonal Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	7.60	2.85	70	-5.33	.001
May, 1978	4.36	4.08	67		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.36	4.08	67	-6.88	.001
Control	8.75	1.89	24		

TABLE 27

Grade 12 Instrument: L. Interpersonal Skills

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.23	3.28	64	3.63	.001
May, 1978	8.05	2.28	66		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	8.05	2.28	66	1.57	.058
Control	8.95	2.28	22		

OBJECTIVE S5 - SOURCES OF EDUCATION AND TRAINING

Objective S5: As a result of the project the participating students will be able to recognize the variety of types and sources of education and training within the community and outside the community.

A total of 113 activities reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 9 Activities	Grade 8 - 34 Activities
Grade 5 - 22 Activities	Grade 9 - 8 Activities
Grade 6 - 38 Activities	Grade 11 - 1 Activity
	Grade 12 - 1 Activity

Table 28 shows that for the eighth graders there was not a significant difference in scoring from the pretest to the posttest and that the control students scored higher than the project students at the posttest.

Table 29 shows that for the ninth graders there was not a significant difference in scoring from the pretest to the posttest and that the control students scored higher than the project students at the posttest.

Table 30 shows that for the eleventh graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 31 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest and that the project students scored higher than the control students at the posttest.

In grades eight and nine the control students scored higher than the project students at the posttest. The twelfth graders in the project scored higher than the control group, however, the process evaluation showed only one activity for twelfth graders related to this objective. The conclusion is that the project students were about the same as the control students for the instrument used to measure Objective S5.

TABLE 28

Grade 8 Instrument: N. Education/Career Opportunities Relationships

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.75	3.09	140	0.58	.281
May, 1978	5.96	2.61	109		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.96	2.61	109	-2.50	.006
Control	7.00	2.34	51		

TABLE 29

Grade 9 Instrument: N. Education/Career Opportunities Relationships

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.19	2.82	62	-1.21	.113
May, 1978	4.53	3.84	88		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.53	3.84	88	-3.14	.001
Control	6.43	2.58	35		

TABLE 30

Grade 11 Instrument: N. Education/Career Opportunities Relationships

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.50	2.56	28	2.14	.016
May, 1978	7.73	2.42	67		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	7.73	2.42	67	1.45	.074
Control	6.89	2.90	35		

TABLE 31

Grade 12 Instrument: N. Education/Career Opportunities Relationships

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.02	3.68	50	3.35	.001
May, 1978	8.10	2.10	41		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	8.10	2.10	41	2.16	.015
Control	6.89	2.64	35		

OBJECTIVE S6 - OCCUPATIONAL INFORMATION

Objective S6: As a result of the project the participating students will have demonstrated the acquisition of information about different occupations.

A total of 446 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 62 Activities	Grade 8 - 55 Activities
Grade 5 - 71 Activities	Grade 9 - 61 Activities
Grade 6 - 106 Activities	Grade 11 - 47 Activities
	Grade 12 - 44 Activities

Table 32 shows that for the third graders there was a significant gain in scoring from the pretest to the posttest and that the project students scored significantly higher than the control students.

Table 33 consists of ten subtables (labeled 33a through 33j) with each subtable providing a comparison for each item on the instrument. Tables 33a through 33j show that for the fifth graders seven questions showed significantly lower scoring from the pretest to the posttest and three questions showed no difference. In all ten questions the project students scored significantly higher than the control students. Care should be taken to note that the control scores seem to be peculiarly low.

Table 34 consists of ten subtables (labeled 34a through 34j) with each subtable providing a comparison for each item on the instrument. Tables 34a through 34j show that for the sixth graders comparing the pretest scores with the posttest scores revealed five high question scores, three lower question scores and two question scores which were equal. Table 34 a through 34j also show that six of the questions scores were higher for the project students and four question scores showed no difference.

Table 35 shows that for the eighth graders there was not a significant difference from the pretest to the posttest and that there was not a significant difference between the project and control students at the posttest.

Table 36 shows that for the ninth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control students at the posttest.

Table 37 shows that for the eleventh graders there was not a significant difference from the pretest to the posttest and that there was not a significant difference between the project and control students at the posttest.

Table 38 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control students at the posttest.

The data for the lower grades (third, fifth, and sixth) all showed that the project students scored better than the control students. This generalization seems fair despite the possible extraneous weakness possibility in the fifth grade control student scores. The data for the upper grades (eighth, ninth, eleventh, and twelfth) showed no differences between the project and the control students.

The conclusion is that in the lower grades the project students scored higher than the control students but that in the upper grades the project students were about the same as the control students for the instruments used to measure Objective S6.

TABLE 32

Grade 3 Instrument: O. Contrasting Work Settings-Primary

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.06	2.42	122	10.60	.001
May, 1978	8.41	1.60	208		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	8.41	1.60	208	1.74	.041
Control	8.07	1.79	112		

TABLE 33a

Grade 5 Instrument: P. (Q1) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.20	0.23	149	-0.68	.25
May, 1978	1.16	0.65	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.16	0.65	91	3.81	.001
Control	0.84	0.64	165		

TABLE 33b

Grade 5 Instrument: P (Q2) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.24	0.37	149	-2.19	.014
May, 1978	1.10	0.62	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.10	0.62	91	4.65	.001
Control	0.72	0.63	165		

TABLE 33c

Grade 5 Instrument: P (Q3) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.19	0.25	149	0.49	.31
May, 1978	1.22	0.68	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.22	0.68	91	3.14	.001
Control	0.92	0.76	165		

TABLE 33d

Grade 5 Instrument: P (04) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.13	0.23	149	1.21	.113
May, 1978	1.20	0.64	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.20	0.64	91	3.72	.001
Control	0.88	0.67	165		

TABLE 33e

Grade 5 Instrument: P (Q5) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.26	0.27	149	-2.65	.004
May, 1978	1.11	0.60	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.11	0.60	91	3.75	.001
Control	0.79	0.68	165		

TABLE 33f

Grade 5 Instrument: P (Q6) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.33	0.29	149	-4.24	.001
May, 1978	1.07	0.651	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.07	0.65	91	5.08	.001
Control	0.66	0.60	165		

TABLE 33g

Grade 5 Instrument: P (97) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.35	0.28	149	-5.10	.001
May, 1978	1.04	0.63	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.04	0.63	91	4.49	.001
Control	0.67	0.62	165		

TABLE 33h

Grade 5 Instrument: P (08) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.38	0.29	149	-4.90	.001
May, 1978	1.08	0.70	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.08	0.70	91	6.00	.001
Control	0.61	0.57	165		

Grade 5 Instrument: P (09) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.30	0.38	149	-3.91	.001
May, 1978	1.04	0.70	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.04	0.70	91	4.55	.001
Control	0.68	0.58	165		

TABLE 33j

Grade 5 Instrument: P (010) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.43	0.45	149	-5.84	.001
May, 1978	0.97	0.77	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	0.97	0.77	91	5.05	.001
Control	0.52	0.53	165		

TABLE 34a

Grade 6 Instrument: P (Q1) Contrasting Work Settings - Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.13	0.19	129	3.40	.001
May, 1978	1.45	1.06	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.45	1.06	276	2.87	.002
Control	1.14	0.77	118		

TABLE 34b

Grade 6 Instrument: P (Q2) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.23	0.24	129	1.88	.03
May, 1978	1.39	0.95	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.39	0.95	276	2.22	.013
Control	1.17	0.78	118		

TABLE 34c

Grade 6 Instrument: P (Q3) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.28	0.26	129	3.29	.001
May, 1978	1.56	1.10	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.56	1.10	276	2.70	.003
Control	1.28	0.92	118		

TABLE 34d

Grade 6 Instrument: P (Q4) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.21	0.20	129	5.05	.001
May, 1978	1.58	1.18	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.58	1.18	276	3.16	.001
Control	1.23	0.92	118		

TABLE 34e

Grade 6 Instrument: P (05) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.30	0.26	.29	1.44	.075
May, 1978	1.39	0.96	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.39	0.96	276	1.35	.088
Control	1.25	0.93	118		

TABLE 34f

Grade 6 Instrument: P (Q6) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.29	0.27	129	0.82	.206
May, 1978	1.34	0.93	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.34	0.93	276	2.19	.014
Control	1.14	0.78	118		

TABLE 34g

Grade 6 Instrument: P (Q7) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.27	0.24	129	2.34	.01
May, 1978	1.43	1.08	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.43	1.08	276	2.16	.015
Control	1.21	.085	118		

TABLE 34h

Grade 6 Instrument: P (Q8) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.40	0.32	129	-2.46	.006
May, 1978	1.24	0.97	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.24	0.97	276	1.38	.08
Control	1.11	0.80	118		

TABLE 34i

Grade 6 Instrument: P (Q9) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.43	0.31	129	-3.92	.001
May, 1978	1.20	0.86	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.20	0.86	276	0.21	.42
Control	1.18	0.87	118		

TABLE 34j

Grade 6 Instrument: P (Q10) Contrasting Work Settings-Intermediate

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	1.43	0.34	129	-3.83	.001
May, 1978	1.17	1.01	276		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	1.17	1.01	276	0.80	.21
Control	1.08	1.02	118		

TABLE 35

Grade 8 Instrument: Q. Knowing About Jobs

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.18	2.00	76	1.06	.145
May, 1978	5.49	2.24	155		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.49	2.24	155	-0.33	.371
Control	5.70	2.84	23		

TABLE 36

Grade 9 Instrument: Q. Knowing About Jobs

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.11	2.44	85	3.52	.001
May, 1978	5.32	2.27	110		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.32	2.27	110	0.08	.468
Control	5.28	2.28	29		

TABLE 37

Grade 11 Instrument: Q. Knowing About Jobs

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.14	1.93	43	0.44	.330
May, 1978	6.31	1.96	68		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.31	1.96	68	-0.29	.386
Control	6.50	2.55	18		

TABLE 38

Grade 12 Instrument: Q. Knowing About Jobs

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.61	2.77	41	3.44	.001
May, 1978	6.32	1.80	59		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.32	1.80	59	-0.69	.245
Control	6.59	1.92	39		

OBJECTIVE S7 - DECISION MAKING FACTORS

Objective S7: As a result of the project the participating students will demonstrate the ability to identify factors that influence decision making relative to specific career choices.

A total of 74 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 4 Activities	Grade 8 - 9 Activities
Grade 5 - 12 Activities	Grade 9 - 10 Activities
Grade 6 - 33 Activities	Grade 11 - 2 Activities
	Grade 12 - 4 Activities

Table 39 shows that for the eighth graders there was not a significant difference in scoring from the pretest to the posttest and that the control group scored significantly higher than the project students at the posttest.

Table 40 shows that for the ninth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control groups at the posttest.

Table 41 shows that for the eleventh graders there was not a significant difference from the pretest to the posttest and that the control students scored significantly higher than the project students at the posttest.

Table 42 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control groups at the posttest.

For the eighth graders and eleventh graders the control students scored higher than the project students. For the ninth graders and the twelfth graders gains were realized, but the posttest scores were no different than the control students. The conclusion is that the project students were about the same or slightly worse than the control students for the instrument used to measure Objective S7.

TABLE 39

Grade 8 Instrument: R. What Should They Do

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	2.61	1.36	117	0.05	.480
May, 1978	2.62	1.36	96		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	2.62	1.36	96	-2.32	.010
Control	3.24	1.67	55		

TABLE 40

Grade 9 Instrument: R. What Should They Do

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	2.19	1.36	88	3.06	.001
May, 1978	2.87	1.30	61		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	2.87	1.30	61	-0.47	.319
Control	3.04	1.49	23		

TABLE 41

Grade 11 Instrument: R. What Should They Do

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.39	1.80	54	-0.16	.436
May, 1978	3.34	1.69	73		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	3.34	1.69	73	-1.77	.038
Control	3.90	1.55	41		

TABLE 42

Grade 12 Instrument: R. What Should They Do

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.48	1.87	50	1.86	.031
May, 1978	4.19	1.36	26		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.19	1.36	26	0.29	.386
Control	4.05	1.89	22		

OBJECTIVE S8 - SELF ASSESSMENT CAREER OPTIONS

Objective S8: As a result of the project the participating students will identify and evaluate career options in terms of a self assessment.

A total of 38 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 2 Activities	Grade 8 - 16 Activities
Grade 5 - 7 Activities	Grade 9 - 0 Activities
Grade 6 - 10 Activities	Grade 11 - 0 Activities
	Grade 12 - 3 Activities

Table 43 shows that for the eighth graders there was not a significant difference from the pretest to the posttest and that the control students scored significantly higher than the project students.

Table 44 shows that for the ninth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 45 shows that for the eleventh graders there was not a significant difference from the pretest to the posttest and that the project students did not score significantly differently from the control students on the posttest.

Table 46 shows that for the twelfth graders there was not a significant difference from the pretest to the posttest and that project students did not score significantly differently from the control students on the posttest.

For the eighth graders the control students scored significantly higher than the project students. For all other grades there was no difference. The conclusion is that project students were about the same as the control students for the instrument used to measure Objective S8.

TABLE 43

Grade 8 Instrument: S. Choosing a Job

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.78	1.91	50	1.62	.053
May, 1978	5.30	1.81	115		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.30	1.81	115	-2.00	.023
Control	6.11	1.56	19		

TABLE 44

Grade 9 Instrument: S. Choosing a Job

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	4.30	2.34	126	4.76	.001
May, 1978	5.62	1.54	73		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.62	1.54	73	0.14	.444
Control	5.57	1.96	42		

Grade 11 Instrument: S. Choosing a Job

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.57	2.11	21	1.15	.125
May, 1978	6.19	1.89	53		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.19	1.89	53	1.11	.134
Control	5.63	1.67	16		

TABLE 46

Grade 12 Instrument: S. Choosing a Job

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	6.33	2.03	49	0.44	.330
May, 1978	6.48	1.43	66		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	6.48	1.43	66	0.92	.179
Control	6.11	2.19	38		

OBJECTIVE S9 - LIFE ROLES

Objective S9: As a result of the project the participating students will be able to identiiy family, occupational and citizen options in terms of self assessment.

A total of 34 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 3 Activities	Grade 8 - 12 Activities
Grade 5 - 3 Activities	Grade 9 - 4 Activities
Grade 6 - 8 Activities	Grade 11 - 2 Activities
	Grade 12 - 2 Activities

No instruments were available to measure this objective. Consequently, there is no testing data to report on the achievement of the objective.

OBJECTIVE S10 - PARTICIPATE IN CAREER PLANNING

Objective S10: As a result of the project the participating students will have participated in career planning.

A total of 40 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 1 Activity	Grade 8 - 15 Activities
Grade 5 - 3 Activities	Grade 9 - 3 Activities
Grade 6 - 9 Activities	Grade 11 - 3 Activities
	Grade 12 - 6 Activities

Table 47 shows that for the eighth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control students at the posttest.

Table 48 shows that for the ninth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 47 shows that for the eleventh graders there was a significant gain in scoring from the pretest to the posttest, but that the control students scored significantly higher than the project students at the posttest.

Table 50 shows that for the twelfth graders there was not a significant difference between the pretest and posttest scores and that there was not a significant difference between the project students and the control students at the posttest.

While scoring gains were realized for grades eight, nine, and eleven, posttest scores did not favor the project students. The conclusion is that project students were about the same as the control students for the instrument used to measure Objective S10.

TABLE 47

Grade 8 Instrument: T. Looking Ahead

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.79	1.93	85	5.60	.001
May, 1978	5.35	1.83	102		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.35	1.83	102	0.78	.212
Control	5.00	1.91	23		

TABLE 48

Grade 9 Instrument: T. Looking Ahead

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.93	2.06	88	3.79	.001
May, 1978	5.05	1.86	91		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.05	1.86	91	-0.89	.187
Control	5.41	1.86	29		

Grade 11 Instrument: T. Looking Ahead

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.61	2.32	72	3.55	.001
May, 1978	5.00	2.21	64		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.00	2.21	64	-1.77	.038
Control	5.71	2.04	51		

TABLE 50

Grade 12 Instrument: T. Looking Ahead

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	5.28	2.28	58	0.33	.371
May, 1978	5.10	2.13	23		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	5.10	2.13	23	0.24	.405
Control	4.96	1.72	25		

OBJECTIVE S11 - GAIN EDUCATION OR TRAINING (BASIC SKILLS)

Objective S11: As a result of the project the participating students will identify information and skills necessary to gain further education or training toward achieving career goals.

A total of 75 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 4 Activities	Grade 8 - 21 Activities
Grade 5 - 5 Activities	Grade 9 - 6 Activities
Grade 6 - 30 Activities	Grade 11 - 4 Activities
	Grade 12 - 5 Activities

Table 51 through 71 provide the comparative basic skills data which is available to the project. All twenty tables contain the same basic information. Each table contains two parts. The top part provides the comparison of 1977 project school scores with the 1977 control school scores (pretest). The bottom part provides the comparison of 1978 project schools scores with the 1978 control school score (posttest).

The tables are labeled to indicate the grade level being compared and the test instrument used to make the comparison. The schools were divided into two groups for making the comparisons: Keating, Lillibridge, Scripps, and Stark (project schools) are compared with Robeson (control school); and Campbell, George, Lincoln, and Williams (project schools) are compared with Hally (control school). Because Lincoln School was closed at the end of the 1976-77 school year they do not have data available for 1978. Because the sixth grade was removed from George School at the end of the 1976-77 school year no data will appear for 1978 grade six.

Rather than proceed in detail through all 20 tables contained in this objective, a summary reporting discussion will be used.

The statistical comparisons for the pretest (1977) scores are summarized as follows:

Nonsignificant differences		33
Significant differences		45
Favoring Project	13	
Favoring Control	32	

The statistical comparisons for the posttest (1978) scores are summarized as follows:

Nonsignificant differences		31
Significant differences		38
Favoring Project	2	
Favoring Control	36	

The comparisons of the pretest scores yielded only 13 comparisons in favor of the project students. The postest found that this amount had dropped to only 2 comparisons favoring the project schools.

The number of comparisons favoring the control group students increased only slightly from the pretest (32) to the posttest (36). The number of nonsignificant differences did not change appreciably.

The conclusion is that the project students were not helped in terms of increased scoring on basic skills test (ITBS) after seven months (September, 1977 through March, 1978 (testing in early April)) of teachers exposing career education concepts to the students.

TABLE 51

PRETEST PROJECT VS PRETEST CONTROL

Grade: 3 Instrument: ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1977	19.36	7.84	90	0.72	N.S.
P--Lillibridge, 1977	22.41	11.72	80	2.36	.05
P--Scripps, 1977	27.51	9.43	63	5.65	.001
P--Stark, 1977	19.31	7.54	86	0.69	N.S.
C--Robeson, 1977	18.38	9.60	80		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1978	18.80	8.34	87	-4.69	.001
P--Lillibridge, 1978	21.59	10.00	110	-2.52	.02
P--Scripps, 1978	24.06	9.93	63	-0.72	N.S.
P--Stark, 1978	19.12	9.56	78	-4.04	.001
C--Robeson, 1978	25.24	8.99	75		

TABLE 52

PRETEST PROJECT VS PRETEST CONTROL

Grade: 3 **Instrument:** ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	19.90	8.91	108	-5.49	.001
P-- George, 1977	29.32	7.10	22	-0.32	N.S.
P-- Lincoln, 1977	27.90	7.53	51	-1.03	N.S.
P-- Williams, 1977	18.27	6.72	102	-6.67	.001
C-- Hally, 1977	30.49	16.45	68		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	27.92	13.75	85	2.72	.01
P-- George, 1978	23.94	8.90	16	.58	N.S.
P-- Lincoln (N.A.), 1978	-	-	-	-	-
P-- Williams, 1978	24.26	9.91	81	1.15	N.S.
C-- Hally, 1978	22.33	9.85	63		

TABLE 53

PRETEST PROJECT VS PRETEST CONTROL

Grade: 3 Instrument: ITBS - Mathematics Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1977	15.49	6.36	59	-0.05	N.S.
P-- Lillibridge, 1977	16.33	7.70	79	0.63	N.S.
P-- Scripps, 1977	19.95	7.26	64	3.51	.001
P-- Stark, 1977	14.23	5.21	87	-1.32	N.S.
C-- Robeson, 1977	15.56	7.55	81		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1978	13.45	5.16	87	-2.17	.05
P-- Lillibridge, 1978	15.72	5.92	110	0.18	N.S.
P-- Scripps, 1978	14.13	5.30	63	-1.30	N.S.
P-- Stark, 1978	13.22	5.25	79	-2.32	.02
C-- Robeson, 1978	15.54	6.98	76		

TABLE 54

PRETEST PROJECT VS PRETEST CONTROL

Grade: 3 Instrument: ITBS - Mathematics Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	12.70	4.25	105	-5.93	.0001
P-- George, 1977	29.05	5.46	22	3.57	.01
P-- Lincoln, 1977	20.76	6.91	51	0.42	N.S.
P-- Williams, 1977	15.07	6.88	100	-3.47	.001
C-- Helly, 1977	19.99	11.35	68		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	10.32	4.84	85	-6.25	.001
P-- George, 1978	17.06	4.68	16	.79	N.S.
P-- Lincoln, 1978	-	-	-	-	-
P-- Williams, 1978	12.63	5.83	81	-3.24	.001
C-- Helly, 1978	15.81	5.75	63		

TABLE 55

PRETEST PROJECT VS PRETEST CONTROL

Grade: 3 Instrument: ITBS - Mathematical Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1977	19.61	8.71	89	2.70	.01
P--Lillibridge, 1977	23.24	8.82	79	5.53	.001
P--Scripps, 1977	22.16	7.61	64	4.85	.001
P--Stark, 1977	19.68	8.56	87	2.78	.02
C--Robeson, 1977	16.33	6.69	80		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1978	9.18	3.94	87	-2.44	.02
P--Lillibridge, 1978	10.46	4.64	110	-0.54	N.S.
P--Scripps, 1978	10.67	4.42	63	-0.21	N.S.
P--Stark, 1978	9.11	4.38	79	-2.35	.02
C--Robeson, 1978	10.84	4.69	76		

TABLE 56

PRETEST PROJECT VS PRETEST CONTROL

Grade: 3 Instrument: ITBS - Mathematical Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	17.31	6.74	101	-3.59	.001
P-- George, 1977	26.05	5.52	22	0.94	N.S.
P-- Lincoln, 1977	21.16	7.59	50	-0.90	N.S.
P-- Williams, 1977	17.64	8.21	100	-3.18	.01
C-- Hally, 1977	23.14	13.90	66		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	7.94	3.97	85	-5.24	.001
P-- George, 1978	12.56	4.47	16	1.04	N.S.
P-- Lincoln, 1978	-	-	-	-	-
P-- Williams, 1978	9.01	5.14	81	-3.03	.01
C-- Hally, 1978	11.38	3.85	63		

TABLE 57

PRETEST PROJECT VS PRETEST CONTROL

Grade: 4 Instrument: ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1977	18.31	8.31	106	-1.78	N.S.
P-- Lillibridge, 1977	20.02	8.13	112	-0.35	N.S.
P-- Scripps, 1977	22.92	11.54	59	1.53	N.S.
P-- Stark, 1977	19.22	8.22	64	-0.88	N.S.
C-- Robeson, 1977	20.43	8.70	101		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1978	22.12	9.42	69	-2.28	.05
P-- Lillibridge, 1978	24.92	8.54	109	-0.21	N.S.
P-- Scripps, 1978	21.71	9.83	45	-2.17	.05
P-- Stark, 1978	25.48	8.64	60	0.23	N.S.
C-- Robeson, 1978	25.16	9.46	194		

TABLE 58

PRETEST PROJECT VS PRETEST CONTROL

Grade: 4 Instrument: ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	17.47	6.53	74	-4.88	.001
P-- George, 1977	33.48	6.24	29	4.58	.001
P-- Lincoln, 1977	21.81	7.85	53	-1.52	N.S.
P-- Williams, 1977	23.01	9.26	90	-0.86	N.S.
C-- Hally, 1977	24.37	9.65	60		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	27.67	10.22	63	-1.78	N.S.
P-- George, 1978	31.55	11.23	29	0.13	N.S.
P-- Lincoln, 1978	-	-	-	-	-
P-- Williams, 1978	35.19	11.99	84	1.95	N.S.
C-- Hally, 1978	31.20	10.95	54		

TABLE 59

PRETEST PROJECT VS PRETEST CONTROL

Grade: 4 Instrument: ITBS - Mathematical Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1977	11.53	5.69	106	-3.71	.01
P-- Lillibridge, 1977	13.14	5.85	112	-1.64	N.S.
P-- Scripps, 1977	12.19	6.52	59	-2.30	.05
P-- Stark, 1977	13.09	5.34	64	-1.53	N.S.
C-- Robeson, 1977	14.43	5.48	101		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1978	11.99	5.09	69	-4.35	.001
P-- Lillibridge, 1978	12.79	5.08	109	-3.80	.001
P-- Scripps, 1978	11.87	5.18	45	-3.81	.001
P-- Stark, 1978	12.13	5.10	60	-3.94	.001
C-- Robeson, 1978	15.14	5.15	191		

TABLE 60

PRETEST PROJECT VS PRETEST CONTROL

Grade: 4 **Instrument:** ITBS - Mathematical Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	11.32	5.25	73	-3.54	.001
P-- George, 1977	13.45	5.67	29	-1.01	N.S.
P-- Lincoln, 1977	17.55	5.38	53	2.48	.02
P-- Williams, 1977	13.68	5.66	90	-1.17	N.S.
C-- Hally, 1977	14.83	6.08	60		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	11.98	3.82	62	-7.84	.001
P-- George, 1978	14.83	6.02	29	-2.85	.01
P-- Lincoln (N.A.), 1978	-	-	-	-	-
P-- Williams, 1978	18.76	6.69	84	.40	N.S.
C-- Hally, 1978	18.33	4.81	54		

TABLE 61

PRETEST PROJECT VS PRETEST CONTROL

Grade: 4 Instrument: ITBS - Mathematical Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1977	9.21	4.93	103	-2.13	.05
P-- Lillibridge, 1977	9.39	4.79	112	-1.94	N.S.
P-- Scripps, 1977	8.78	5.38	59	-2.24	.05
P-- Stark, 1977	8.94	4.00	64	-2.34	.05
C-- Robeson, 1977	10.72	5.14	101		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1978	9.78	4.35	69	-1.47	N.S.
P-- Lillibridge, 1978	9.61	4.57	109	-2.01	.02
P-- Scripps, 1978	9.62	4.25	45	-1.46	N.S.
P-- Stark, 1978	9.02	4.50	50	-2.49	.02
C-- Robeson, 1978	10.73	4.64	192		

TABLE 62

PRETEST PROJECT VS PRETEST CONTROL

Grade: 4 Instrument: ITBS Mathematical Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1977	7.05	3.70	74	-6.45	.001
P--George, 1977	9.97	4.97	29	-1.77	N.S.
P--Lincoln, 1977	13.74	4.81	53	1.77	N.S.
P--Williams, 1977	9.90	4.58	90	=2.65	.02
C--Hally, 1977	12.05	5.18	60		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1978	8.00	4.00	63	-6.33	.001
P--George, 1978	10.93	4.50	29	-1.98	N.S.
P--Lincoln, 1978	-	-	-	-	-
P--Williams, 1978	13.32	4.70	84	0.39	N.S.
C--Hally, 1978	13.00	4.46	54		

TABLE 63

PRETEST PROJECT VS PRETEST CONTROL

Grade: 5 Instrument: ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1977	27.64	9.50	106	1.43	N.S.
P--Lillibridge, 1977	25.43	11.31	152	-0.41	N.S.
P--Scripps, 1977	27.39	10.00	88	1.13	N.S.
P--Stark, 1977	23.79	9.24	68	-1.51	N.S.
C--Robeson, 1977	25.91	10.11	191		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1978	23.55	8.79	93	-2.73	.01
P--Lillibridge, 1978	31.29	12.84	139	3.09	.01
P--Scripps, 1978	29.68	12.00	60	1.53	N.S.
P--Stark, 1978	27.49	10.58	70	0.24	N.S.
C--Robeson, 1978	27.12	10.70	169		

TABLE 64

PRETEST PROJECT VS PRETEST CONTROL

Grade: 5 **Instrument:** ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	20.49	6.85	102	-5.21	.001
P-- George, 1977	31.05	11.55	19	1.19	N.S.
P-- Lincoln, 1977	-	-	-	-	-
P-- Williams, 1977	21.14	6.33	95	-4.78	.001
C-- Hally, 1977	27.64	10.35	58		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	21.47	7.10	81	-6.98	.001
P-- George, 1978	33.26	14.29	19	0.18	N.S.
P-- Lincoln, 1978	-	-	-	-	-
P-- Williams, 1978	38.48	13.28	88	2.75	.01
C-- Hally, 1978	32.65	11.79	62		

TABLE 65

PRETEST PROJECT VS PRETEST CONTROL

Grade: 5 Instrument: ITBS - Mathematical Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1977	27.35	8.11	106	13.81	.0001
P--Lillibridge, 1977	14.09	5.66	150	-2.37	.02
P--Scripps, 1977	12.89	4.78	88	-3.67	.001
P--Stark, 1977	13.28	5.82	67	-2.71	.02
C--Robeson, 1977	15.65	6.22	189		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Keating, 1978	12.45	4.72	93	-5.62	.001
P--Lillibridge, 1978	16.30	6.82	139	0.01	N.S.
P--Scripps, 1978	14.20	4.82	60	-2.58	.02
P--Stark, 1978	14.06	5.51	70	-2.82	.001
C--Robeson, 1978	16.29	5.54	169		

TABLE 66

PRETEST PROJECT VS PRETEST CONTROL

Grade: 5 Instrument: ITBS - Mathematical Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1977	10.78	3.65	102	-7.44	.001
P--George, 1977	20.74	6.22	19	2.45	.05
P--Lincoln (N.A.), 1977	-	-	-	-	-
P--Williams, 1977	11.72	3.34	95	-6.29	.001
C--Hally, 1977	16.64	6.24	58		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1978	13.06	3.61	81	-9.36	.001
P--George, 1978	18.95	6.05	19	-1.02	N.S.
P--Lincoln, 1978	-	-	-	-	-
P--Williams, 1978	17.47	5.90	89	-3.15	.001
C--Hally, 1978	20.56	5.85	62		

TABLE 67

PRETEST PROJECT VS PRETEST CONTROL

Grade: 5 Instrument: ITBS - Mathematical Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1977	28.43	9.84	103	19.08	.001
P-- Lillibridge, 1977	10.26	5.48	151	-1.94	N.S.
P-- Scripps, 1977	10.05	4.75	88	-2.02	.05
P-- Stark, 1977	8.67	4.58	67	-3.71	.001
C-- Robeson, 1977	11.41	5.37	190		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Keating, 1978	9.70	3.90	93	-4.13	.001
P-- Lillibridge, 1978	12.17	5.60	139	0.31	N.S.
P-- Scripps, 1978	10.46	4.30	59	-2.27	.05
P-- Stark, 1978	9.09	5.03	70	-4.37	.001
C-- Robeson, 1978	11.99	4.47	169		

TABLE 68

PRETEST PROJECT VS PRETEST CONTROL

Grade: 5 Instrument: ITBS - Mathematical Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1977	7.54	3.38	104	-8.34	.001
P--George, 1977	15.24	6.01	17	1.02	N.S.
P--Lincoln (N.A.), 1977	-	-	-	-	-
P--Williams, 1977	7.93	3.35	95	-7.60	.001
C--Helly, 1977	13.57	5.76	58		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1978	9.38	3.54	81	-5.90	.001
P--George, 1978	11.84	4.14	19	-1.33	N.S.
P--Lincoln (N.A.), 1978	-	-	-	-	-
P--Williams, 1978	13.31	5.33	89	-0.15	N.S.
C--Helly, 1978	13.44	4.63	62		

TABLE 69

PRETEST PROJECT VS PRETEST CONTROL

Grade: 6 **Instrument:** ITBS - Mathematical Concepts

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	12.49	4.76	76	-6.02	.001
P-- George, 1977	18.03	6.60	31	0.71	N.S.
P-- Lincoln, 1977	-	-	-	-	-
P-- Williams, 1977	11.54	4.15	110	-8.51	.001
C-- Hally, 1977	17.20	4.91	79		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	14.07	4.62	60	-1.97	N.S.
P-- George, 1978	-	-	-	-	-
P-- Lincoln, 1978	-	-	-	-	-
P-- Williams, 1978	13.95	4.70	94	-2.39	.05
C-- Hally, 1978	15.85	5.56	75		

TABLE 70

PRETEST PROJECT VS PRETEST CONTROL

Grade: 6 **Instrument:** ITBS - Reading Comprehension

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1977	22.69	9.44	78	-4.64	.001
P-- George, 1977	31.38	9.88	32	0.95	N.S.
P-- Lincoln, 1977	-	-	-	-	-
P-- Williams, 1977	25.32	8.27	112	-3.34	.01
C-- Holly, 1977	29.53	8.88	79		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P-- Campbell, 1978	19.98	8.00	61	-4.31	.001
P-- George, 1978	-	-	-	-	-
P-- Lincoln, 1978	-	-	-	-	-
P-- Williams, 1978	24.96	9.94	99	-0.91	N.S.
C-- Holly, 1978	26.29	8.74	75		

TABLE 71

PRETEST PROJECT VS PRETEST CONTROL

Grade: 6 **Instrument:** ITBS - Mathematics Problem Solving

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1977	8.51	3.72	78	-5.69	.001
P--George, 1977	10.84	4.97	31	-1.34	N.S.
P--Lincoln, 1977	-	-	-	-	-
P--Williams, 1977	8.86	3.77	111	-5.58	.001
C--Hally, 1977	12.09	4.09	79		

POSTTEST PROJECT VS POSTTEST CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
P--Campbell, 1978	9.37	3.76	60	-0.56	N.S.
P--George, 1978	-	-	-	-	-
P--Lincoln, 1978	-	-	-	-	-
P--Williams, 1978	11.15	6.52	84	1.53	N.S.
C--Hally, 1978	9.77	4.29	74		

OBJECTIVE S12 - RESOURCES TO IMPLEMENT CAREER GOALS

Objective S12: As a result of the project the participating students will identify resources necessary in the implementation of career goals.

A total of 43 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 1 Activity	Grade 8 - 20 Activities
Grade 5 - 4 Activities	Grade 9 - 2 Activities
Grade 6 - 16 Activities	Grade 11 - 1 Activity
	Grade 12 - 0 Activities

Table 72 shows that for the eighth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 73 shows that for the ninth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 74 shows that for the eleventh graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 75 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Although all four grades showed increases in scoring during the project, the scoring levels were not above those of the control group. The conclusion is that project students were about the same as the control students for the instrument used to measure Objective S12.

TABLE 72

Grade 8 Instrument: V. Personal Attitudes Toward Work

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	9.10	3.15	77	2.32	.010
May, 1978	10.25	2.96	77		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	10.25	2.96	77	-1.18	.119
Control	10.84	2.57	50		

TABLE 73

Grade 9 Instrument: V. Personal Attitudes Toward Work

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	9.01	3.23	80	2.21	.014
May, 1978	10.12	2.66	60		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	10.12	2.66	60	0.12	.452
Control	10.00	3.56	16/76		

TABLE 74

Grade 11 Instrument: V. Personal Attitudes Toward Work

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	7.89	5.82	36	3.52	.001
May, 1978	11.44	2.20	97		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	11.44	2.20	97	-0.34	.367
Control	11.61	2.30	28		

TABLE 75

Grade 12 Instrument: V. Personal Attitudes Towards Work

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	9.42	3.67	50	2.92	.002
May, 1978	11.73	3.36	33		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	11.73	3.36	33	-0.24	.405
Control	11.92	3.18	39		

OBJECTIVE S13 - GOAL ATTAINMENT INFLUENCING FACTORS

Objective S13: As a result of the project the participating students will identify the factors which will influence the attainment of career goals.

A total of 50 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing is as follows:

Grade 3 - 2 Activities	Grade 8 - 20 Activities
Grade 5 - 4 Activities	Grade 9 - 2 Activities
Grade 6 - 18 Activities	Grade 11 - 1 Activity
	Grade 12 - 2 Activities

Two instruments were used on the eighth through twelfth graders to measure this objective. Instrument U. Job Acquisition and Retention results are reported in Tables 76 through 79. Instrument W. Work Attitudes results are reported in Tables 80 through 83.

Table 76 shows that for the eighth graders there was not a significant difference from the pretest to the posttest and that there was not a significant difference between the project and control scores at the posttest.

Table 77 shows that for the ninth graders there was not a significant difference from the pretest to the posttest and that the control students scored significantly higher than the project students at the posttest.

Table 78 shows that for the eleventh graders there was a significant gain in scoring from the pretest to the posttest, but that there was not a significant difference between the project and control scores at the posttest.

Table 79 shows that for the twelfth graders there was not a significant difference from the pretest to the posttest and that there was not a significant difference between the project and control scores at the posttest.

Table 80 shows that for the eighth graders there was not a significant difference from the pretest to the posttest and the control students scored significantly higher than the project students at the posttest.

Table 81 shows that for the ninth graders there was not a significant difference from the pretest to the posttest and no significant difference between the project and control students at the posttest.

Table 82 shows that for the eleventh graders data was not available from the pretest. Table 82 also shows that there was not a significant difference between the project and control groups at the posttest.

Table 83 shows that for the twelfth graders there was a significant gain in scoring from the pretest to the posttest and that the project students scored significantly higher than the control students.

The twelfth grade project students on the second instruments scored higher than the control students, but the ninth grade control students scored higher than their project student counterparts. The conclusion is that the project students were about the same as the control students for both instruments used to measure Objective S13.

TABLE 76

Grade 8 Instrument: U. Job Acquisition and Retention

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	11.16	3.09	76	0.58	.281
May, 1978	11.41	2.35	96		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	11.41	2.35	96	0.92	.179
Control	11.00	2.26	37		

TABLE 77

Grade 9 Instrument: U. Job Acquisition and Retention

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	10.04	4.17	88	-0.42	.337
May, 1978	9.80	3.56	105		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	9.80	3.56	105	-6.01	.001
Control	12.83	1.50	18		

TABLE 78

Grade 11 Instrument: U. Job Acquisition and Retention

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	10.29	3.97	58	1.68	.047
May, 1978	11.29	2.83	104		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	11.29	2.83	104	-1.28	.100
Control	11.92	1.98	25		

TABLE 79

Grade 12 Instrument: U. Job Acquisition and Retention

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	11.73	3.35	48	0.35	.363
May, 1978	12.00	3.76	41		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	12.00	3.76	41	1.20	.115
Control	11.17	2.27	41		

TABLE 80

Grade 8 Instrument: W. Work Attitudes

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.51	1.53	47	0.01	.496
May, 1978	3.67	1.91	138		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	3.67	1.91	138	-2.68	.004
Control	4.60	1.50	25		

Grade 9 Instrument: W. Work Attitudes

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.69	1.83	83	1.56	.059
May, 1978	4.12	1.74	86		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.12	1.74	86	-0.50	.309
Control	4.27	1.31	33		

TABLE 82

Grade 11 Instrument: W. Work Attitudes

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	-	-	-	-	-
May, 1978	4.47	1.60	74		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.47	1.60	74	-1.37	.085
Control	4.84	1.27	44		

Grade 12 Instrument: W. Work Attitudes

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	3.34	2.63	53	4.04	.001
May, 1978	4.93	1.23	71		

PROJECT VS. CONTROL

Group	Mean	Standard Deviation	Number	t-Value	Probability
Project	4.93	1.23	71	1.69	.045
Control	4.51	1.39	49		

OBJECTIVE S14 - GOAL CHANGE FACTORS

Objective S14: As a result of the project the participating students will identify those factors which will cause the student to change career goals.

A total of 33 activities were reported by the classroom teachers in the process evaluation. The grade breakdown of those activities for the grades which participated in the testing program is as follows:

Grade 3 - 0 Activities	Grade 8 - 19 Activities
Grade 5 - 4 Activities	Grade 9 - 1 Activity
Grade 6 - 7 Activities	Grade 11 - 1 Activity
	Grade 12 - 1 Activity

No instruments were available to measure this objective. Consequently, there is no testing to report on the achievement of the objective.

OBJECTIVE E1 - EDUCATOR KNOWLEDGE OF CAREER EDUCATION

Objective E1 - The educators will demonstrate higher levels of knowledge of career education.

Table 84 shows that for the teachers in the project schools (both participants and nonparticipants in the project) that the average scoring on the 26 items of the instrument increased an average of four additional correct questions. This increase is judged to be extremely large considering that: 1) all teachers in the project schools were tested and 2) an average of 21 correct is close to the total number possible.

The conclusion is that the objective was achieved quite firmly.

TABLE 84

Teachers Instrument: G. Educator Knowledge of Career Education

PRE-TEST VS. POST-TEST

Group	Mean	Standard Deviation	Number	t-Value	Probability
March, 1977	17.00	5.23	363	11.58	.001
May, 1978	21.04	3.40	252		

STUDENT COMMENTS RELATED TO CAREER EDUCATION PROGRAM

An additional instrument was utilized in the evaluation effort. This Instrument A2. Suggestions Questionaire asked only two simple questions. 1. Please list those good things which the school does to help students prepare for the future. 2. Please list those things which the school should be doing (but it is not now doing) to help students prepare for the future. Lined spaces on half a sheet of paper was provided for the students to fill in their suggestions.

At the time of the needs assessment (pretest) the form was administered to the students for internal information to the project. About 10% of the students who filled out the questionaire made some indication about their school providing the good point of preparation for jobs, college, or job information.

At the posttesting the evaluation consultant decided to administer the same instrument to see if any of the career education efforts would be recognized by the students as being a "good thing" about their school. A total of over 175 students made some indication of the career effort. This 175 represents about 30% of the students in the project schools who were administered the instrument.

Appendix C provides copy of the student responses. The clarity and specificity of the student responses to specific and general career education concepts or skills is most striking. On most of these forms the term "career education" is used. The copies are divided into five catagories. Appendix C-1 lists student comments regarding career education classes. Appendix C-2 lists student comments regarding assistance with learning about job application forms and procedures. Appendix C-3 contains student comments regarding the school helping to find jobs for students. Appendix C-4 contains student comments regarding career education by using specific terms from within career education skills. Appendix C-5 contains student comments

regarding general career activities.

The specificity of content and the volume of student attention given to career education by the students in their appraisal of good things about their school is most impressive. The conclusion is that the students of the project schools have been impressed and effected positively by the career education program.

GENERAL PROJECT CONCLUSIONS

The conclusions which can be drawn on the outcomes of the project as a whole can be divided into three types: those conclusions which might be regarded as negative to the project; those conclusions which might be regarded as positive to the project; and, those conclusions which seem to relate to the developing discipline of career education. A separate section will follow on each of these three.

Negative to the Project

After having read the preceeding pages it is clear that the project students did not score any differently than the control students on the instruments used to assess student knowledge of career education constructs. The results of the major career education instruments (excluding the basic skills and instrument P in Objective S6) are listed below. The summary for the comparison of the pretest scores with the posttest scores is as follows:

Not a Significant Difference		22
Significant Difference		34
Gains	32	
Losses	2	

These data would at first tend to indicate program success. However, in light of the comparison of posttest control students with project students such is not the case. The summary is as follows:

Not a Significant Difference		35
Significant Differences		21
Favoring Project	8	
Favoring Control	13	

The difficulty in the data is the question, "How can the project students improve in scoring and yet not surpass the control students when the two groups started roughly equal?" One possible explanation would be that perhaps the control school was "contaminated" by receiving career education during the

year. Information provided to the evaluation staff does not indicate that such "contamination" had occurred.

A second possible explanation would be that the difference in test administrators might have caused both groups to improve. At the pretesting contract teachers were used to administer the instruments. At the posttesting the project staff was used. The evaluation consultant found no indication of tampering on the part of the project staff doing the administration. Indeed, the presence of the posttesting comparison data with so many not significant differences would preclude the possibility of tampering. The professional capability of the project staff was, however, higher than the contract teachers. The evaluator's judgement is that this general higher competence on the part of the project staff is the probable cause of general higher scoring on the part of both the project students and the control students.

A second potentially negative aspect of the findings is the low number of activities which were produced by the project teachers in comparison to the arbitrarily established criterion of two activities per week. The teachers produced an average of 0.78 activities per week using the 24 "week" criterion. If the number of activities produced were projected onto the full academic schedule of weeks for the school system the average would be just over 0.50 activities per week. That number is translated to one career education activity every two weeks.

The largest unknown in the activities produced by teachers is the word reported. If a teacher conducted an activity but did not fill out the form, then the activity would not be included in the data. All project staff and all project teachers knew the importance of filling out the forms. Indeed, a major effort was launched after the second bi-monthly report to increase the reporting level. If each teacher had only reported one out of two activities then the average number of reported activities would have only increased to one activity per

week. To achieve the criterion of two activities per week per teacher, only one out of four activities would have been reported on the forms. Considering the large effort and the general knowledge of the importance of reporting activities it does not seem possible that the criterion could have been achieved without the evaluation team not being aware of that achievement.

A possible criticism could be voiced that two career education activities per week per teacher was unreasonably high. The evaluation consultant can not imagine that any less of an effort would make a difference in student knowledge of career education concepts (not to mention spin-off effects on basic skills). The criterion seems to be quite reasonable, if not even too low.

The evaluator feels that this low level of teacher activity is directly tied to the lack of project student success in outscoring the control students at the posttest. Objective S6 (page 51) showed the largest number of activities (446) provided by the teachers in the tested grades. Within Objective S6 the three elementary grades accounted for 54% of the activities while the four high school grades accounted for 46% of the activities. It was the elementary project grades which consistently outscored the control grades. This observation might be criticized in that the instruments were of a different nature. However, the results leading to the observation that the low scoring can be attributed to the low number of reported activities seem consistent within the data.

A third potentially negative aspect of the project is not contained directly in the data. The aspect is that a major staff effort and a stipend were necessary in order to increase the level of teacher reported activities. The point could be made that the report forms were only so much busy work which really got in the way of good career education efforts.

These forms were designed to be very simple to complete but still provide the teacher some structure within which to design a lesson. Without the structure lessons could become just some little activity untied to any content or curriculum

objective.

To criticize the project teachers or the school system for this unwillingness on the part of teachers to fill out the report forms would not be entirely justified. An identicial occurrence was observed in a much smaller project in suburban Livonia (Project ENTICE). There too teachers needed intense encouragement and a stipend before the level of career education infusion could be raised.

Positive to the Project

Although the first positive aspect of the project was above discussed as a negative aspect, the number of activities which were devised by the project staff was quite large. To have a collection of 1,943 activities devised is an impressive collection. USCE might consider commissioning someone to sort through the activities reported on the bi-monthly reports and to formulate the better ones into an idea collection. A central computerized and terminal accessed data bank (much like the ERIC system) would be very valuable to the career educators of this country.

The second positive aspect of the project was the project staff itself. These people functioned in a highly competent and professional manner. They were willing to put in extra time or do that little extra in order to do a good job. In January one of the staff resigned to take another position. In Spring one of the staff took his own life. Losing two people in those ways is very difficult. However, the project staff continued to take on the additional tasks without complaint because the work needed to be done.

As an outside observer, the evaluation consultant is confident to say that this project staff accomplished that which could be accomplished. Not much more could have been accomplished within this project than was accomplished by the project staff.

A third positive aspect was the increase in scoring by the teachers on the instrument which measured their knowledge of career education. Objective E1 (page 133) found that the teachers increased in average scoring from 17 correct to 21 correct. A total of 26 points were possible on the instrument. This increase in scoring was for all teachers in the project schools, not just the 100 teachers who had participated in the career education project itself. Such a large increase in scoring does include increases due to the training received by the project teachers between the two testing sessions. The increase is so large however, that it must include increases in knowledge of the part of other teachers in the project schools. Such an increase speaks highly for the project infusion effort into the school in general.

The fourth positive aspect were the over 175 comments made by students describing career education as a "good thing" about their school. Reading through the comments provided in the five parts of Appendix C will show that these comments are largely career education specific. The clear feeling is that even though scoring did not show differences, the project students did feel an impact of having a career education program within their schools. These students may not have yet learned a lot of the content contained within career education, but they seem to be aware and appreciative that such a program is starting. They seem to feel the need for career education skills.

General Observations Concerning Career Education

It is a serious difficulty that the content of career education has not yet been placed into a learning sequence. At present a teacher is confronted with 10 to 30 objectives for career education and perhaps a few suggestions of what might be done in some grades. The teacher is then turned loose to "infuse career education".

What actually happens then is that the teacher simply market shops through the

objectives or activities suggestions until the teacher comes to an activity which strikes the teacher's fancy. That teacher says, "That looks like a neat idea", and does an infusion. Most of career education instruction seems to happen in this manner. Students receiving this typical type of career education experience will never get the full content of material so nicely specified in the various listings of objectives or learner goals.

If career education is to make the impact on the students in both career education knowledge and effect upon basic skills which educators keep promising to legislatures then the order and consistency will have to be brought to the discipline. After observing this project for two years, and the application to the students for the last nine months, the evaluation consultant can not see how this pick-and-choose approach to what the students encounter in career education will have the expected effects.

The preceeding discussion leads to a discussion of instrumentation used in assessment of career education skills. When an evaluator has no idea at the beginning of a project what specifically will be taught to which students and at what level of difficulty, measurement becomes a broad activity. In this project 13 student objective (excluding Objective S11 - Basic Skills) were identified as possible sources of instructional content. After reviewing all the reported teacher activities, the evaluation consultant feels that it is entirely possible that all of the instruments used at the high school grades were on a much higher level of difficulty than the teachers were instructing. However, without a proper advance sequencing of specific learner objectives and learning activities the evaluator can not discover mismatch between level of instruction and level of measurement until one or two years into teacher infusion. The result is that the evaluation efforts continue regardless of whether or not the instrumentation is appropriate. Time does not permit any other course within the contract.

The entire field of career education needs improvment in instrumentation.

Instruments need to be less verbal. Instruments need to be more specific to the individual instead of the present third person assessment (i.e. What should George do?). However, before instrumentation revision can move out of the experimentation stage the content of career education must be sequenced.

The final observation developed out of this project but more general in nature is that infusion does not come quickly (i.e. two years of a project). Even after an individual teacher becomes committed to career education as the way to teach children career skills and basic skills, years are still required to bring about the curriculum to restructure the classroom experience. The teacher has some activities available, but is largely left to the teacher's own initiative Sometimes thisevaluation consultant feels that the most efficient way to infuse career education would be to rewrite the major textbooks and teachers guides and student workbooks. Without such changes, financial resources will not be sufficient to spend the amounts of money used in this project on all school children in support of career education.

The infusion process is a slow and expensive method of getting career education into the schools. Whether infusion is slower and/or more expensive than some other method is impossible to say. Perhaps infusion is in fact the best way to proceed. The point is that the much disucssed speed with which students will improve as a result of career education efforts was found to be incorrect in this project.